

# How It Got Started: MO 94/364/Muegge Interchange Improvements St. Charles, MO



# Agenda

## The Need for Improvement

- Overview
- Crash History
- Congestion
- Limited Access
- Economic Development

## Alternatives

- MO 94
- MO 94/364/Muegge Interchange
- Comparisons 2040 No Build to Build

## Gathering Support and Funding

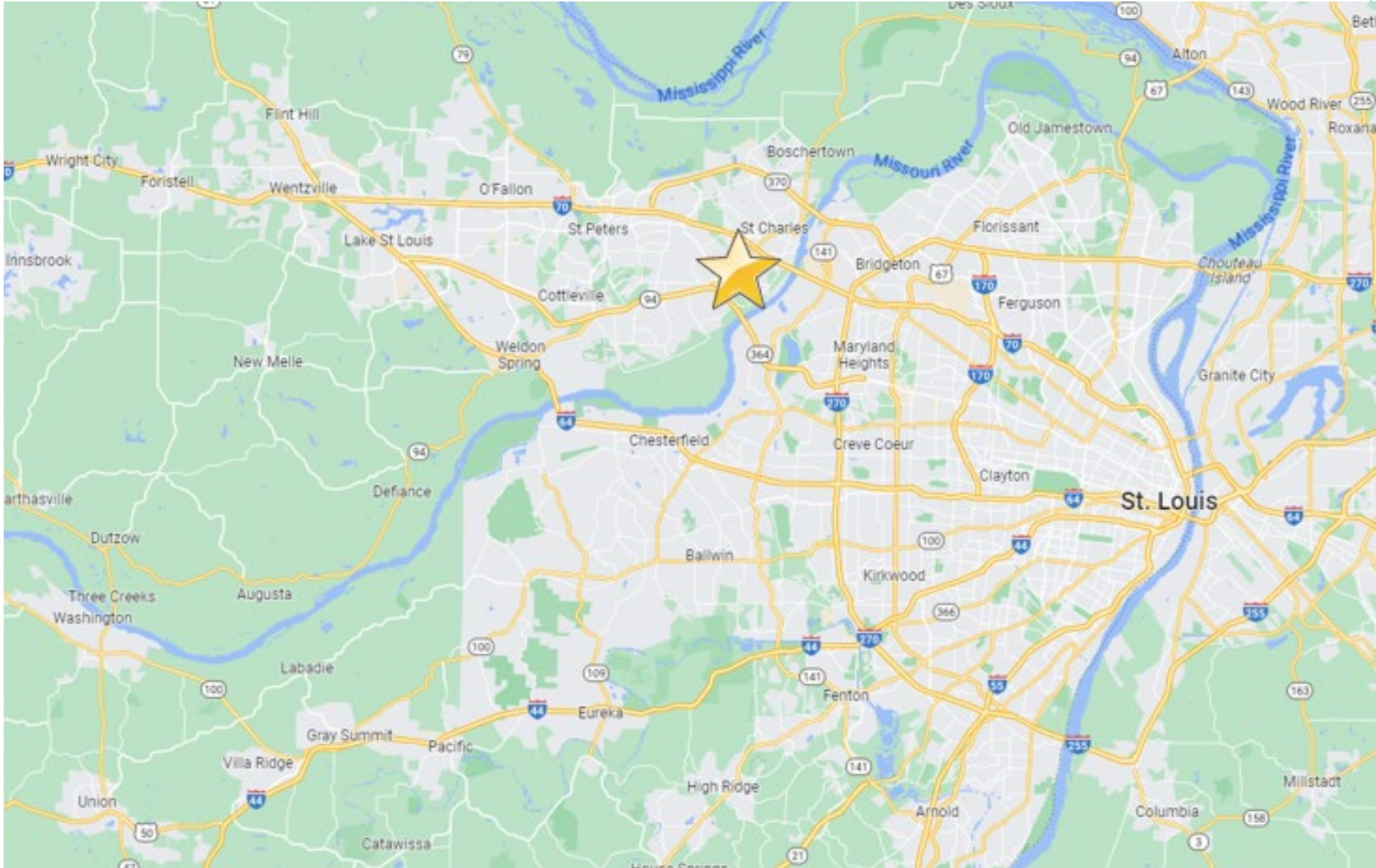
- Federal, State, County, & Local

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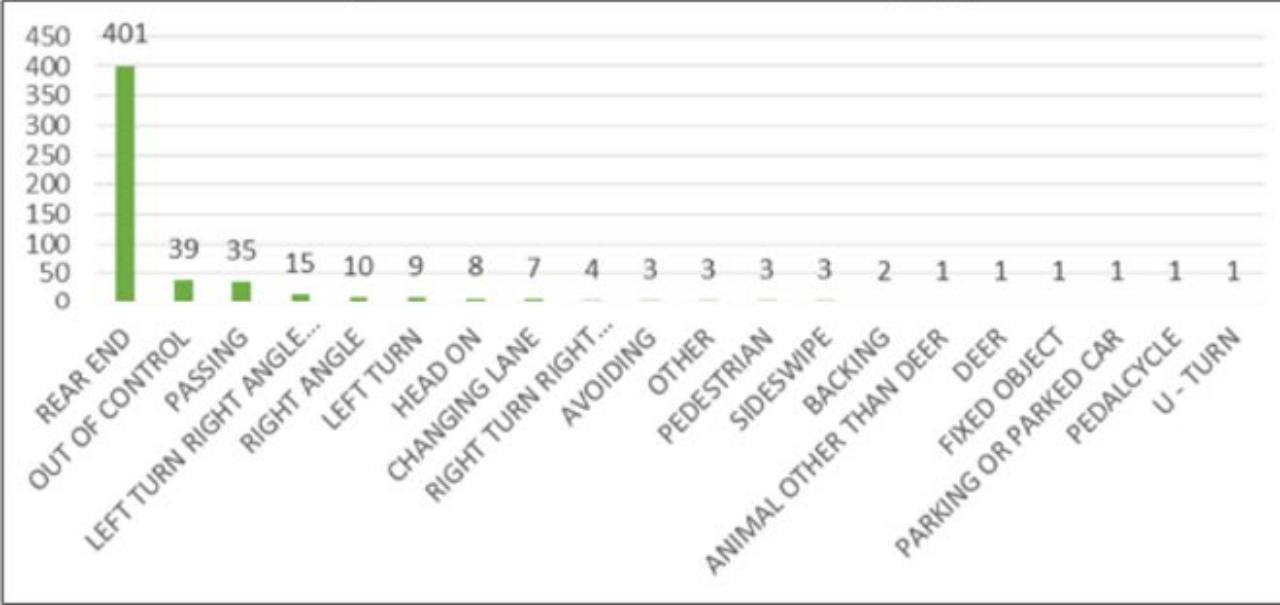
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**MO 94 OBSERVED CRASHES HERITAGE CROSSING TO I-70  
YEAR 2010 TO 2014  
TOTAL ACCIDENTS OBSERVED: 907**

HIGHEST NUMBER OF INTERSECTION CRASHES:  
#1: ZUMBEHL/FRIEDENS  
#2: PRAIRIE DRIVE

Figure 10: Route 94 Eastbound Crashes by Type



**LEGEND**

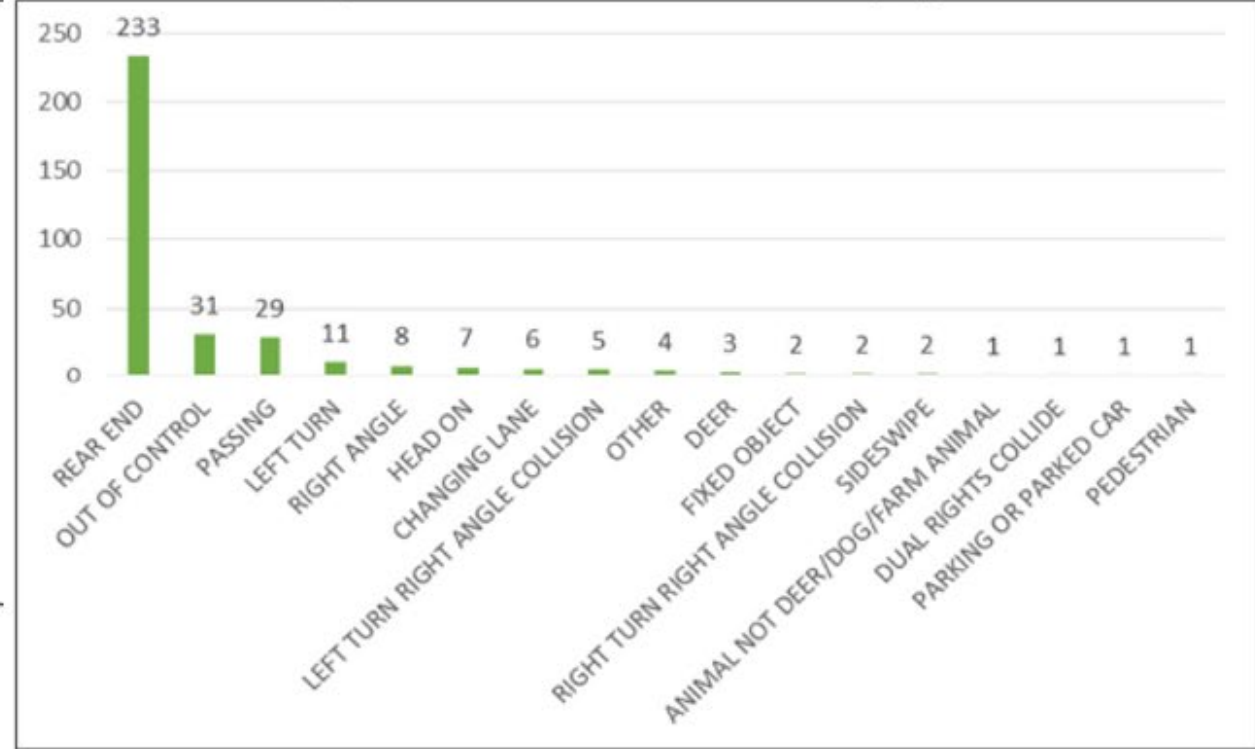
- FATAL CRASH
- DISABLING INJURY CRASH

**MO 94 WEST OF I-70  
EAST OF SHERMAN INTERSECTION**

WEST 94  
NO CRASHES  
OBSERVED

EAST 94

Figure 11: Route 94 Westbound Crashes by Type



**5**

OUT OF CONTROL

**TOTAL CRASHES OBSERVED:**  
WEST BOUND 94: 110  
EAST BOUND 94: 113  
ZUMBEHL/FRIEDENS: 63

**1**

DEER

**TOTAL CRASHES OBSERVED:**  
WEST BOUND 94: 16  
EAST BOUND 94: 10

**3**

DEER

**TOTAL CRASHES OBSERVED:**  
WEST BOUND 94: 24  
EAST BOUND 94: 34  
SHERMAN DRIVE: 8

**TOTAL CRASHES OBSERVED:**  
WEST BOUND 94: 110  
EAST BOUND 94: 113  
ZUMBEHL/FRIEDENS: 63



N ST. PETERS PARKWAY

S ST. PETERS PARKWAY

N ST. PETERS PARKWAY

S ST. PETERS PARKWAY



INTERSTATE 70

D

B

C

AM PEAK HOUR



INTERSTATE 70

D

C

C

PM PEAK HOUR



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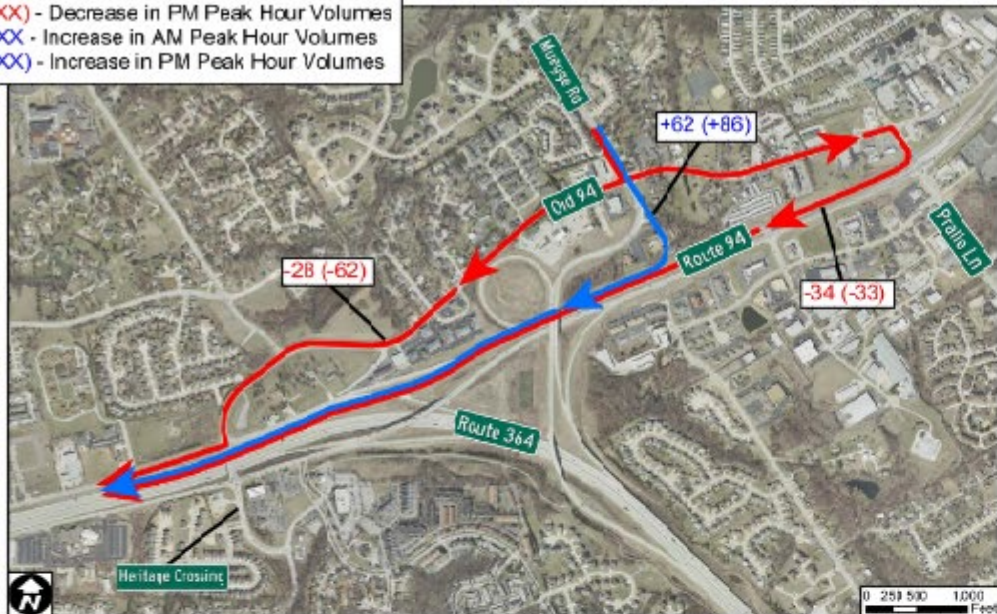


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### Traffic Diversions Due to Route 94/Muegge Rd Direct Access

- XX - Decrease in AM Peak Hour Volumes
- (-XX) - Decrease in PM Peak Hour Volumes
- XX - Increase in AM Peak Hour Volumes
- (XX) - Increase in PM Peak Hour Volumes



To Route 94 West from Muegge Road



To Route 94 East from Muegge Road



To Muegge Road from Route 94 West



To Muegge Road from Route 94 East



# The Forgotten Corridor - Economic Development

Existing issues with the corridor

- Inconsistency of uses
- Lack of vision
- Undeveloped Land

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# Inconsistency of Uses

- A wide variety of uses
  - Warehouses
  - Industrial
  - Small offices
  - Storage
  - Shopping center
  - Homes
  - Churches
- Varying quality



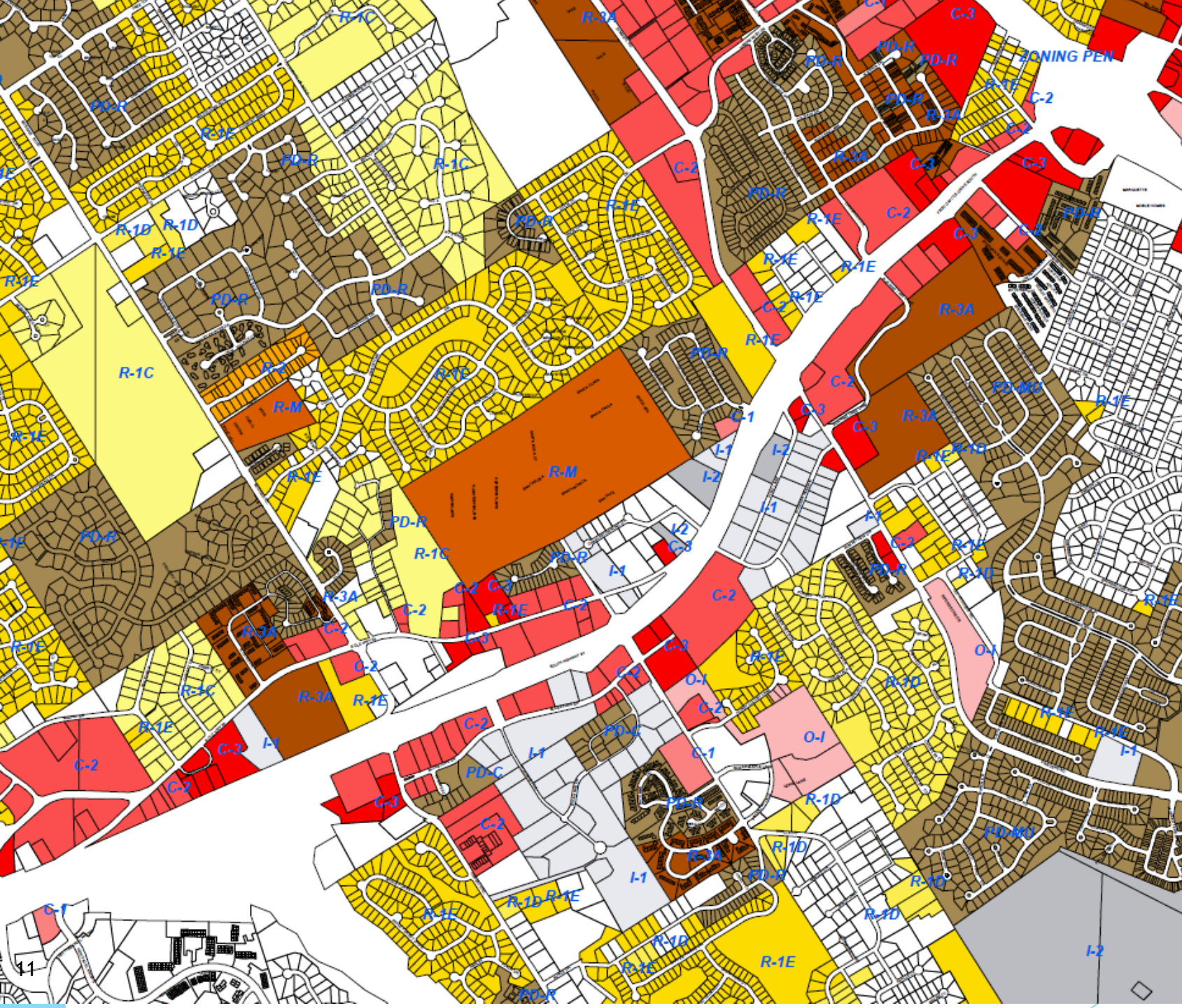
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

























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# Land Use and Zoning



## LEGEND:

### ZONING

	A	AGRICULTURAL
	R-1C	SINGLE FAMILY RESIDENTIAL DISTRICT
	R-1D	SINGLE FAMILY RESIDENTIAL DISTRICT
	R-1E	SINGLE FAMILY RESIDENTIAL DISTRICT
	R-2	TWO FAMILY RESIDENTIAL DISTRICT
	R-3A	MULTI-FAMILY RESIDENTIAL DISTRICT
	R-M	MANUFACTURED/MODULAR RESIDENTIAL DISTRICT
	O-1	OFFICE INSTITUTIONAL DISTRICT
	HCD	HISTORIC COMMERCIAL DISTRICT
	FHCD	FRENCHTOWN HISTORIC COMMERCIAL DISTRICT
	C-1	NEIGHBORHOOD BUSINESS DISTRICT
	C-2	GENERAL BUSINESS DISTRICT
	C-3	HIGHWAY BUSINESS DISTRICT
	OBP	OFFICE BUSINESS PARK
	CBD	CENTRAL BUSINESS DISTRICT
	CRD I	CENTRAL RESIDENTIAL DISTRICT
	CRD-II	CENTRAL RESIDENTIAL DISTRICT
	I-1	LIGHT INDUSTRIAL DISTRICT
	I-2	HEAVY INDUSTRIAL DISTRICT
	PD-RF	PLANNED DEVELOPMENT RIVERFRONT
	PD-I	PLANNED DEVELOPMENT INDUSTRIAL
	PD-R	PLANNED DEVELOPMENT RESIDENTIAL
	PD-MU	PLANNED DEVELOPMENT MULTI USE
	PD-C	PLANNED DEVELOPMENT COMMERCIAL
	ZONING PEN	
	WELLHEAD PROTECTION DISTRICT	
	LANDMARK PRESERVATION DISTRICT OVERLAY	



# Alternatives

## MO 94

- 3<sup>rd</sup> Lane
- Freeway with Outer Roads

## MO 94/364/Muegge Interchange

- At-grade Hemsath Intersection
- System to System Interchange

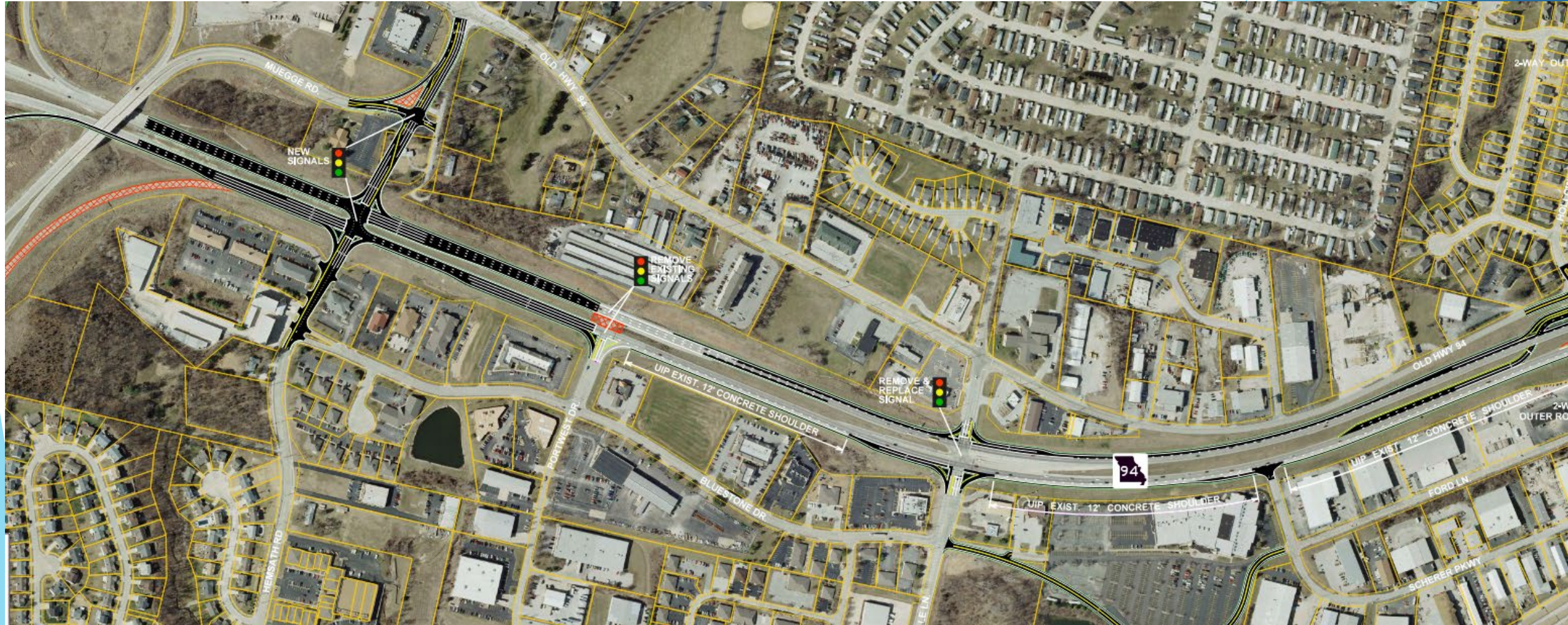
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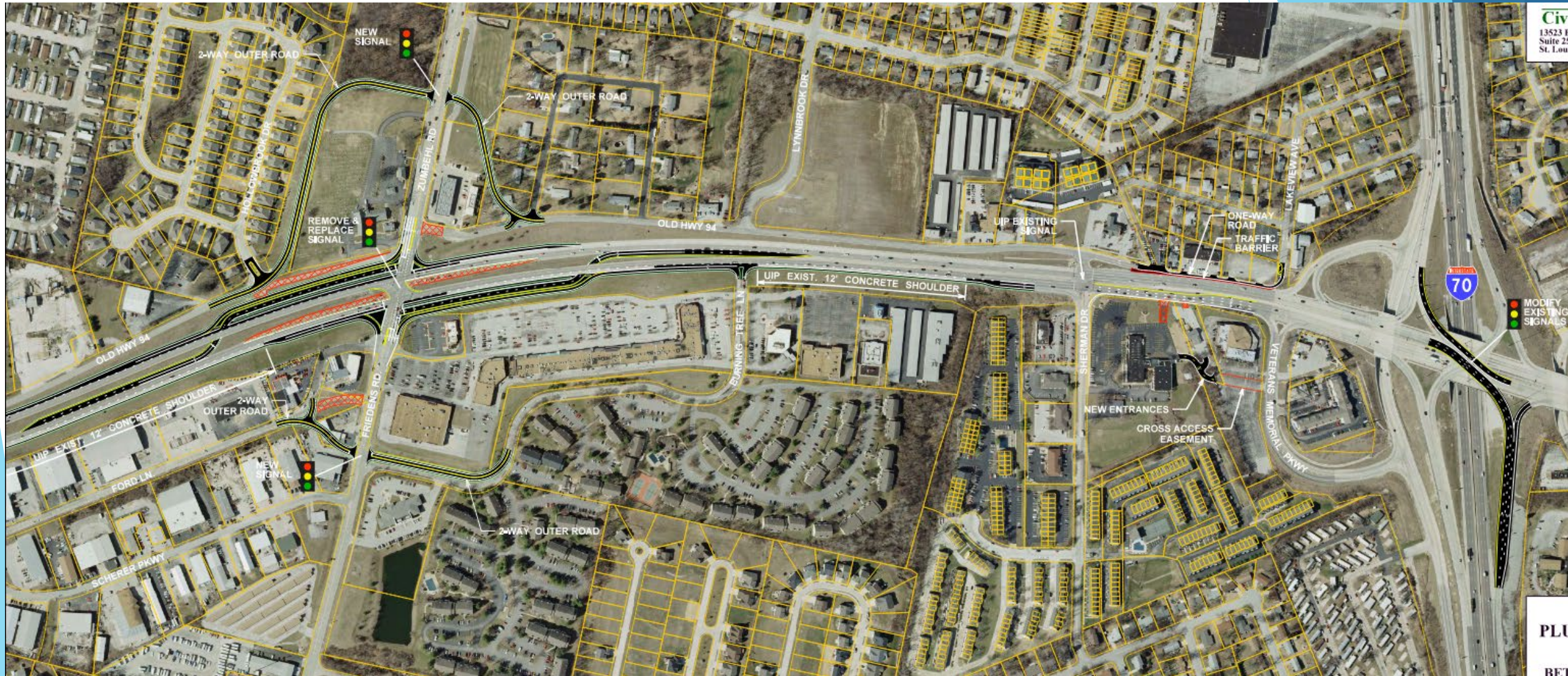
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# 3<sup>rd</sup> Lane Alternative



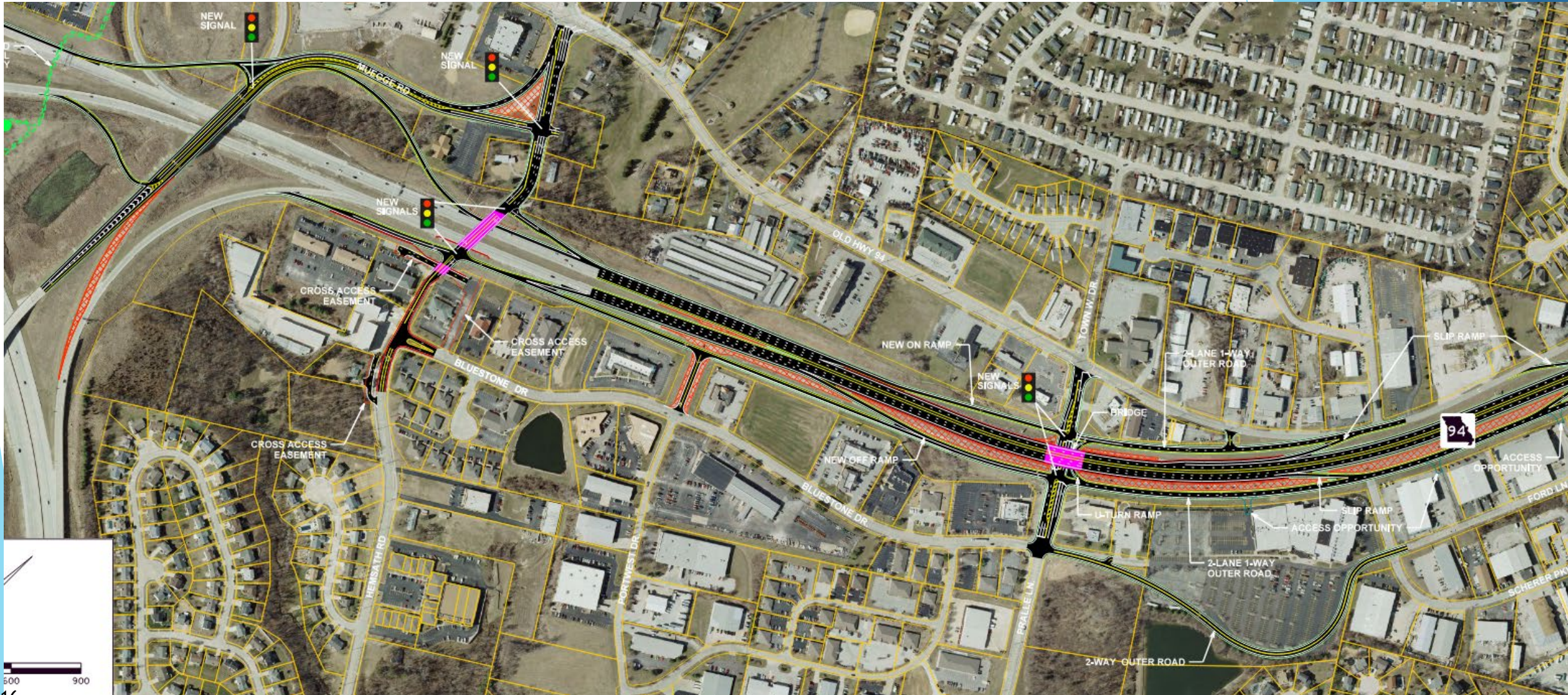
# 3<sup>rd</sup> Lane Alternative



CIV  
13523 R  
Suite 25  
St. Louis

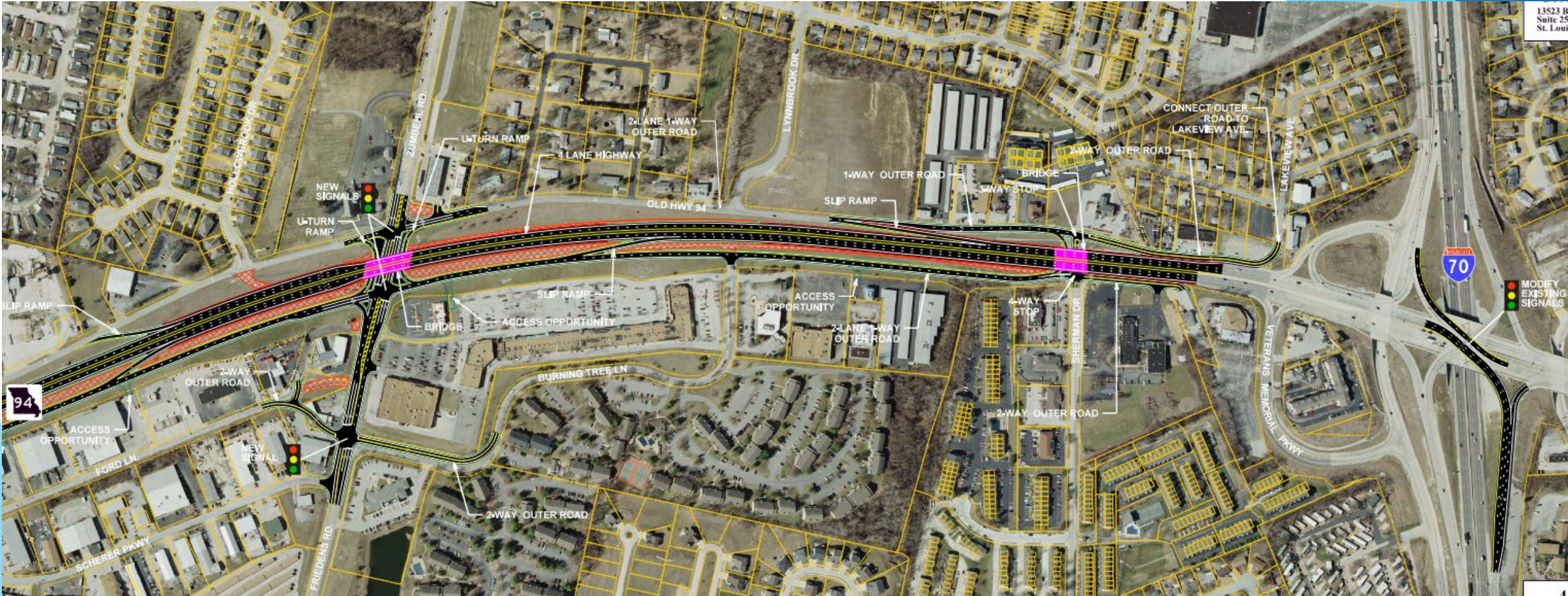
PLU  
BET

# 4 Lane Freeway - One Way Outer Roads, Option A





# 4 Lane Freeway - One Way Outer Roads, Option A



13523 B  
Suite 250  
St. Louis

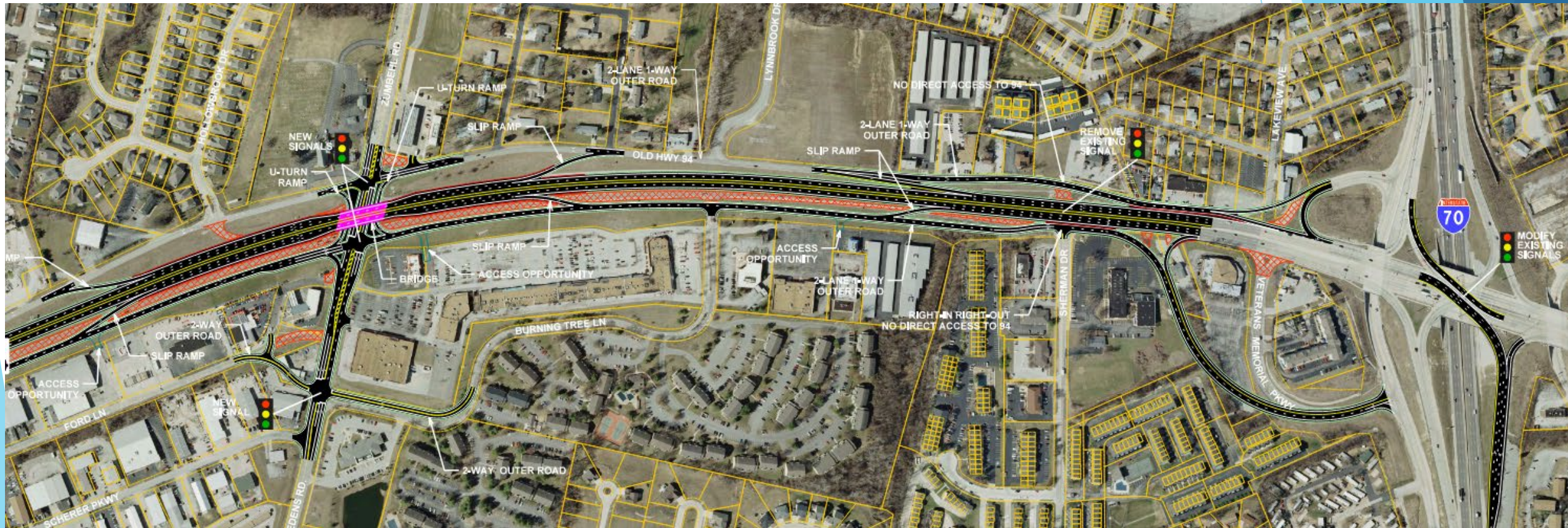
MODIFY  
EXISTING  
SIGNALS

1

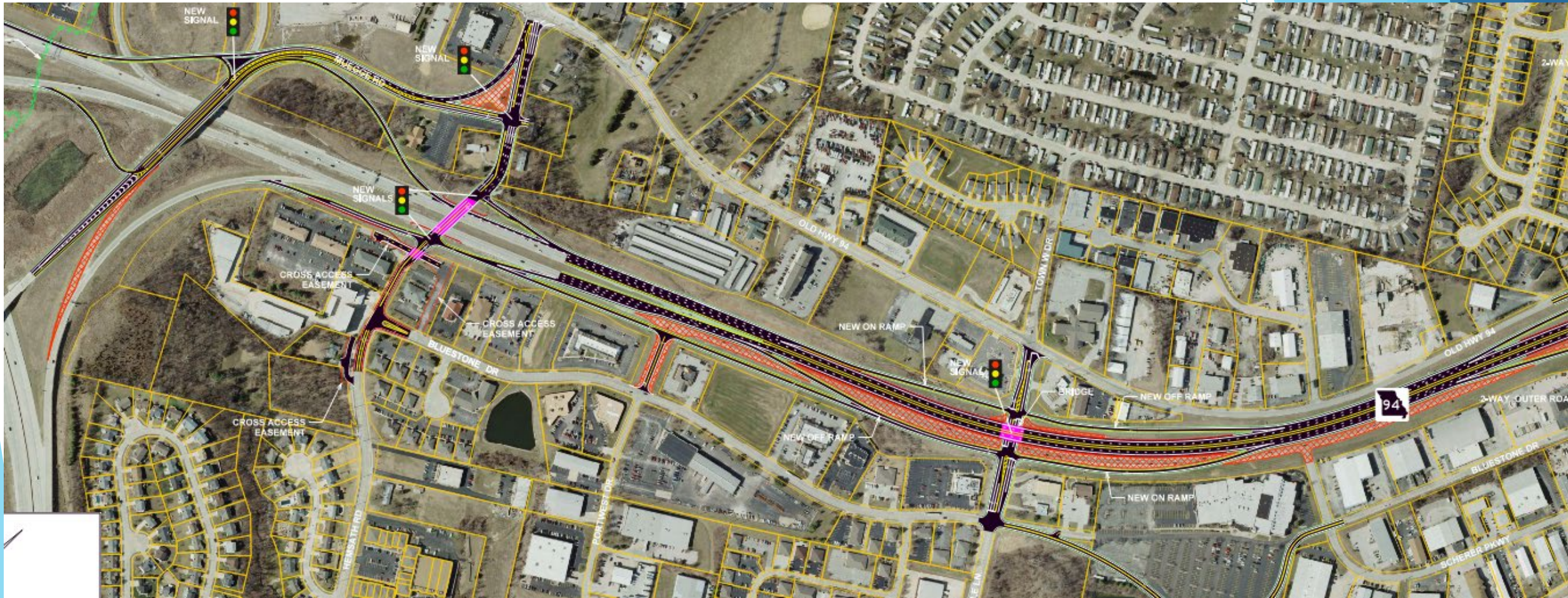
# 4 Lane Freeway - One Way Outer Roads, Option B



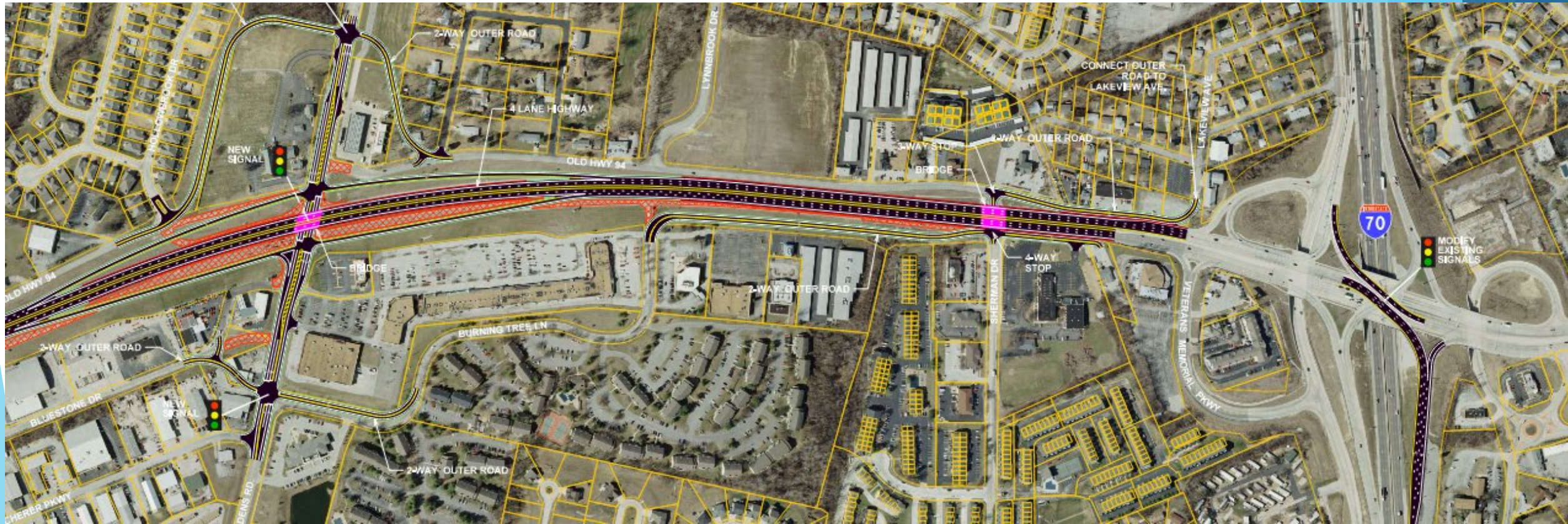
# 4 Lane Freeway - One Way Outer Roads, Option B

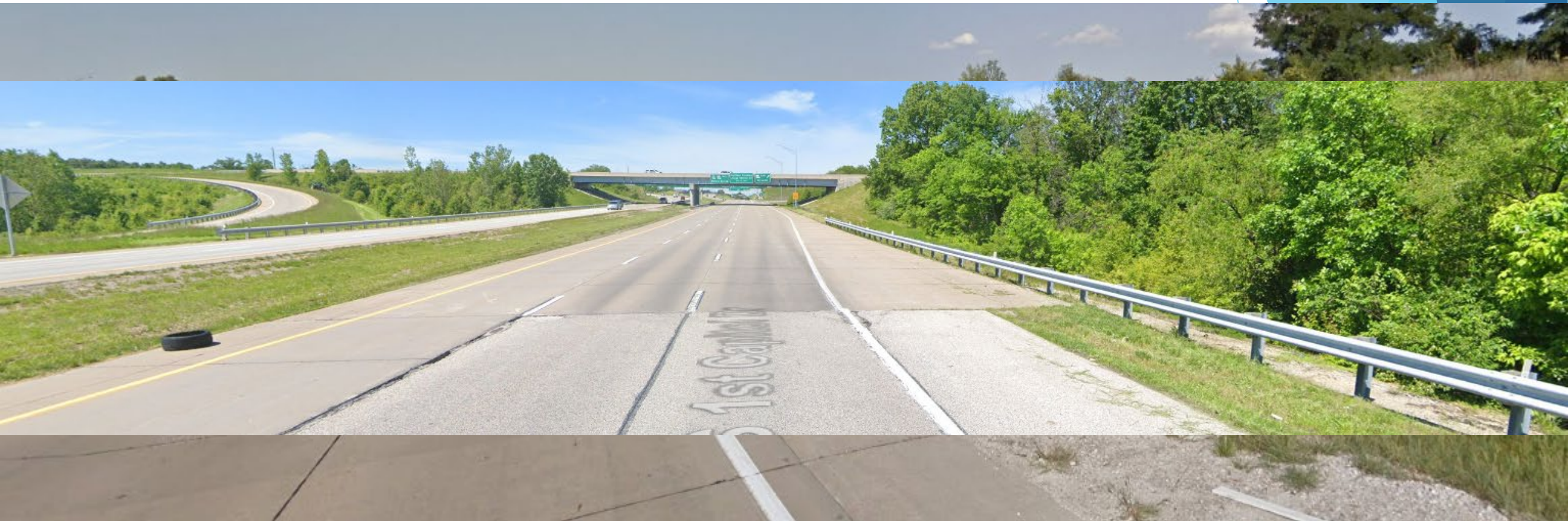


# 4 Lane Freeway - Two Way Outer Roads



# 4 Lane Freeway - Two Way Outer Roads

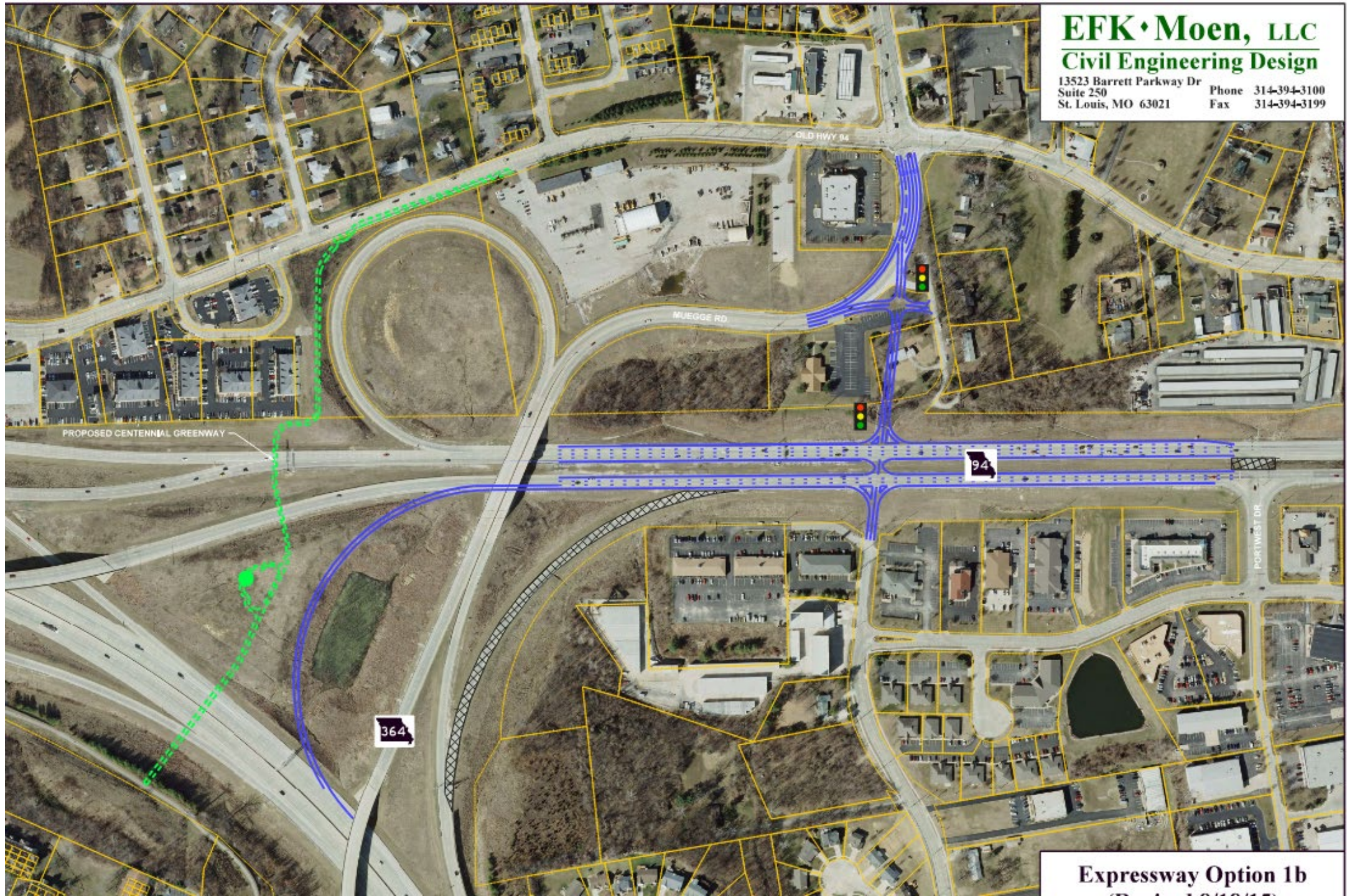




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13523 Barrett Parkway Dr  
Suite 250 Phone 314-394-3100  
St. Louis, MO 63021 Fax 314-394-3199



PROPOSED CENTENNIAL GREENWAY

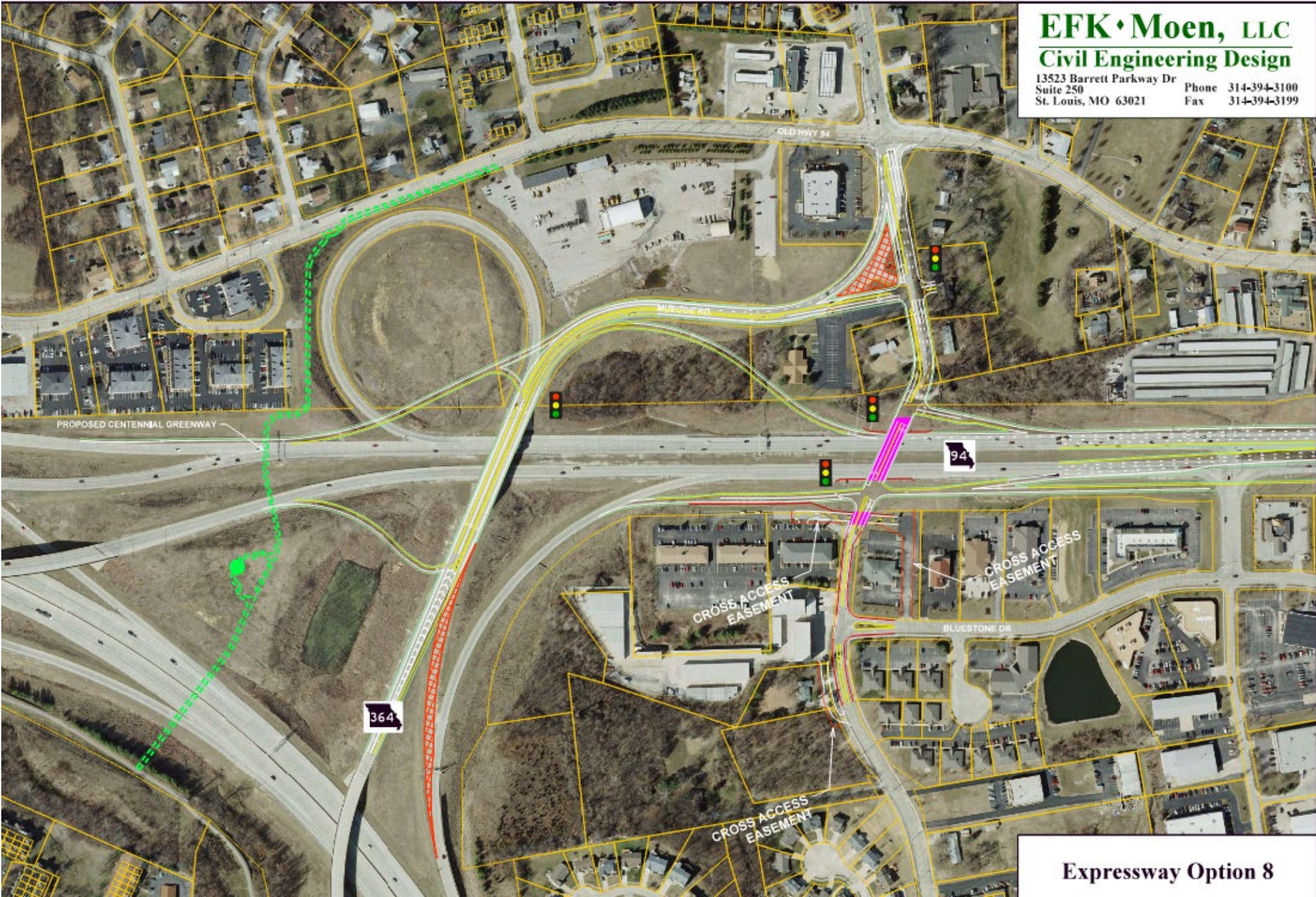
364

94

### Expressway Option 1b

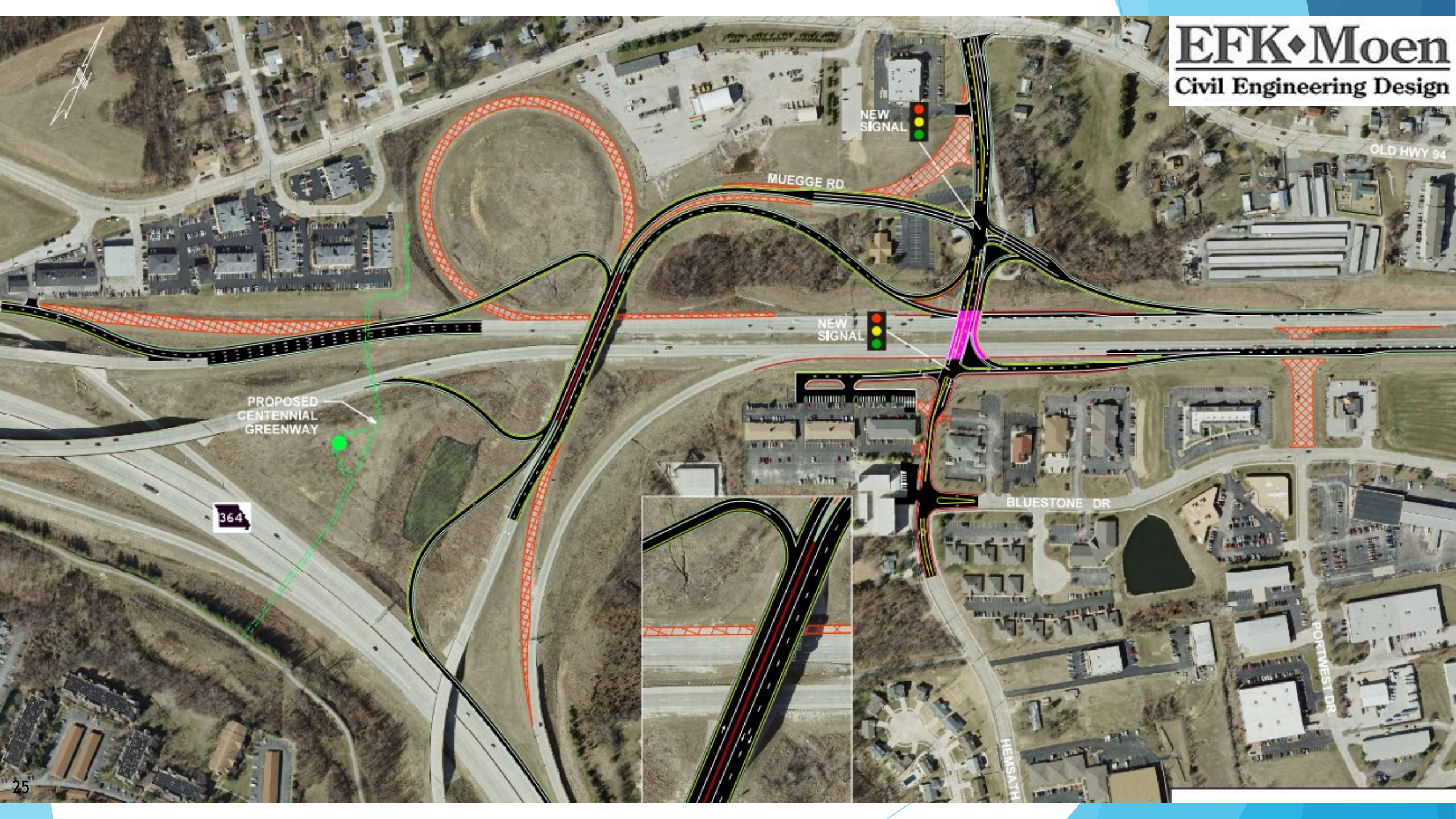


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**Expressway Option 8**





PROPOSED  
CENTENNIAL  
GREENWAY

364

NEW  
SIGNAL

NEW  
SIGNAL

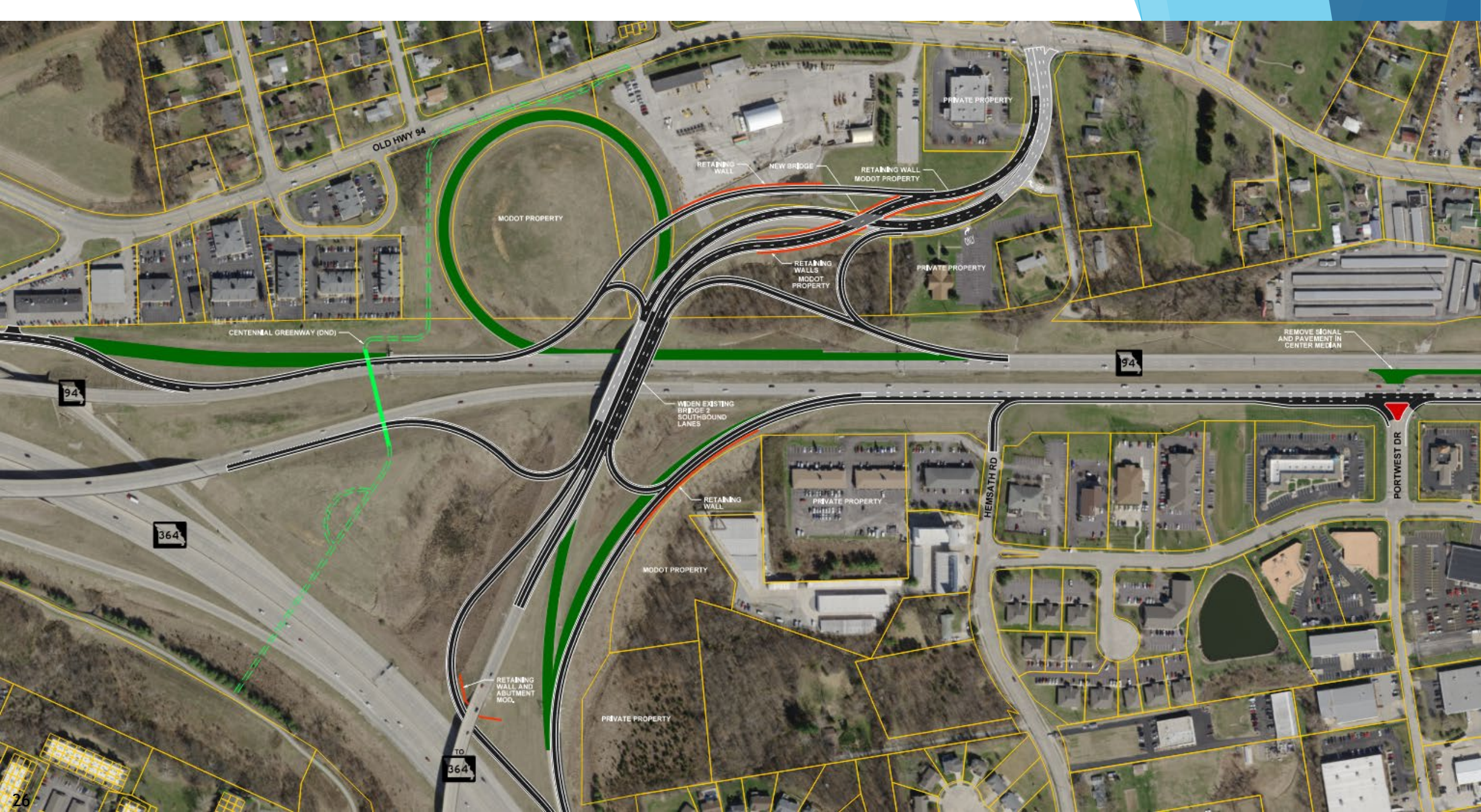
BLUESTONE DR

HEMSATH

PORTWEST DR

OLD HWY 94





OLD HWY 94

MODDOT PROPERTY

PRIVATE PROPERTY

RETAINING WALL

NEW BRIDGE

RETAINING WALL

MODDOT PROPERTY

PRIVATE PROPERTY

RETAINING WALLS

MODDOT PROPERTY

CENTENNIAL GREENWAY (OND)

REMOVE SIGNAL AND PAVEMENT IN CENTER MEDIAN

WIDEN EXISTING BRIDGE 2 SOUTHBOUND LANES

RETAINING WALL

PRIVATE PROPERTY

MODDOT PROPERTY

RETAINING WALL AND ABUTMENT MOD.

PRIVATE PROPERTY

HENSATH RD

PORTWEST DR

94

364

94

TO 364



**Table 13: Alternatives Analysis Summary**

	<b>EXISTING</b>	<b>2040 NO BUILD</b>	<b>3<sup>rd</sup> LANE</b>	<b>ONE WAY – OPT A</b>	<b>ONE WAY – OPT B</b>
<b>PM PEAK HOUR CONGESTION</b>	EB: LOS D WB: LOS D Average Delay: 115 seconds	EB: LOS E WB: LOS F Average Delay: 272 seconds	EB: LOS B WB: LOS B Average Delay: 68 seconds	EB: LOS A WB: LOS A Average Delay: 44 seconds	EB: LOS A WB: LOS A Average Delay: 54 seconds
<b>PM PEAK HOUR TRAVEL TIMES</b>	EB: 5 min 31 sec WB: 6 min 14 sec Total Travel Time: 954 hours	EB: 7 min 24 sec WB: 8 min 51 sec Total Travel Time: 1,757 hours	EB: 3 min 12 sec WB: 3 min 25 sec Total Travel Time: 970 hours	EB: 2 min 12 sec WB: 2 min 05 sec Total Travel Time: 846 hours	EB: 2 min 10 sec WB: 2 min 05 sec Total Travel Time: 909 hours
<b>RESIDUAL CAPACITY</b>	N/A	N/A	+5%	+20 to 25%	+20 to 25%
<b>CRASHES</b>	179 Average Annual Crashes	243.3 Annual Crashes Predicted	-10%	-16%	-18%
<b>TOTAL ECONOMIC BENEFIT</b>	--	--	\$182,260,000	\$195,420,000	\$185,840,000
<b>TOTAL CAPITAL COST</b>	0	0	\$33,500,000	\$56,300,000	\$50,600,000
<b>BENEFIT/COST RATIO*</b>	--	--	6.3 to 1	4.0 to 1	4.3 to 1

\*Benefit-cost ratio includes discounting and time-value-of-money and does not compute as the ratio of the reported benefits and cost

# 2040 Comparisons between No Build and Build

Total Study Area 2040 Crash Expectancy per HSM Annually

Summary	No Build	Build
Route 364 Segments	83.5	93
Route 364 Ramps	12.8	11.9
Route 364 Ramp Terminals	78.3	77.3
Route 94	33.3	12.6
Route 364/Route 94/Muegge Ramps	5.6	15.2
<b>TOTAL CRASHES</b>	<b>213.5</b>	<b>210</b>
<b>TOTAL CRASH RATE (per 100MVMT)</b>	<b>118.21</b>	<b>114.94</b>

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## Gathering Support

- FHWA and MoDOT
- Public Meeting
- Community Advisory Group (CAG)

## Funding

- City of St. Charles
- St. Charles County
- MoDOT Cost Share
- Federal

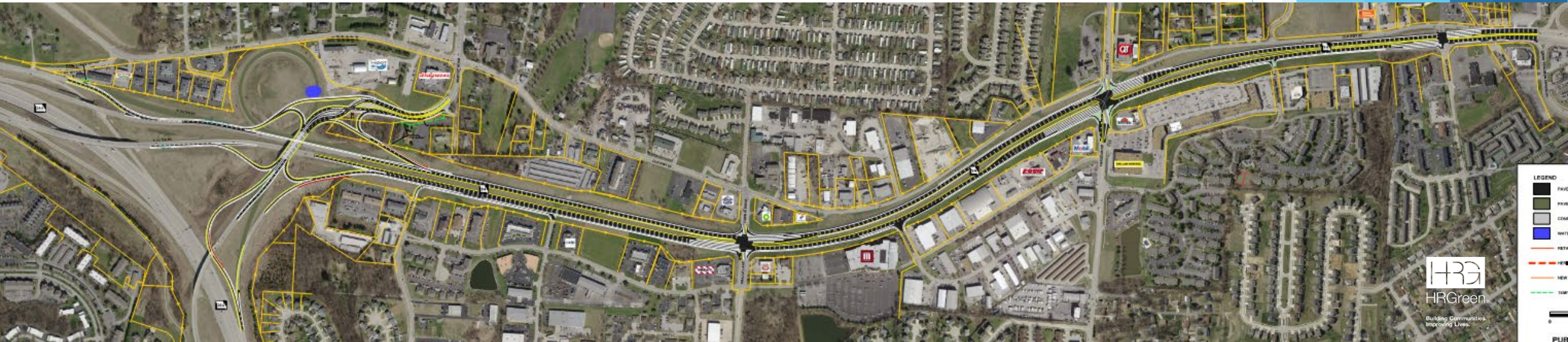
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# Final Design



For more information:  
<https://www.modot.org/interchangeimprovements>





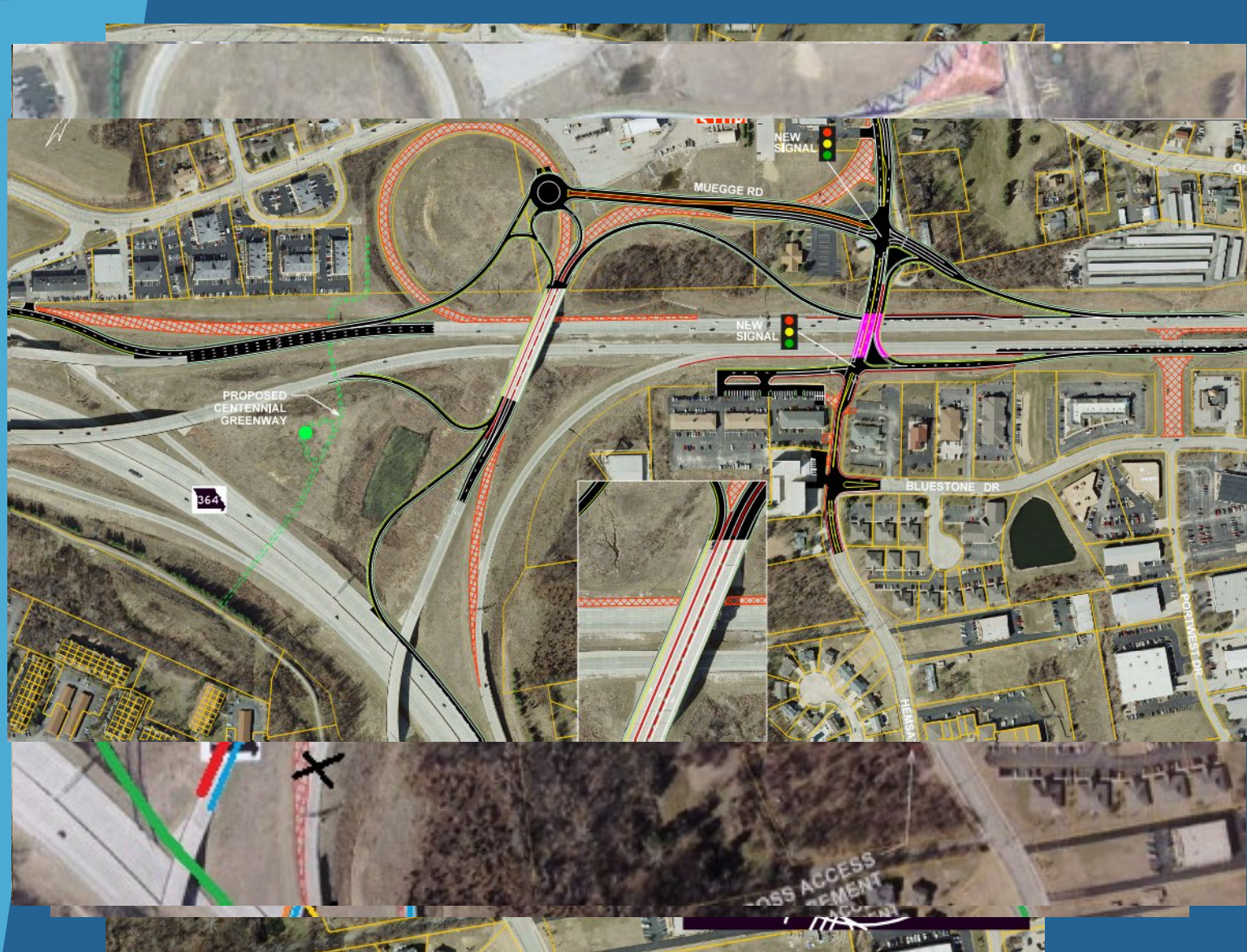
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# Questions?

